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LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY COMMENTS ON EPA'S PROPOSED REVISIONS FOR THE PRIMARY AND SECONDARY NATIONAL AMBIENT AIR QUALITY STANDARDS FOR OZONE (72 FR 37818, JULY 11, 2007)

In an April 9, 2007 letter to EPA Administrator Stephen L. Johnson, Louisiana Governor Kathleen Babineaux Blanco, along with five other Governors of the Southern Governor's Association (SGA), described the considerable progress being made in reducing ozone levels and pointed to a number of recently promulgated federal rules that are expected to lead to further reductions in ambient ozone concentrations. In this letter, Governor Blanco recounts the following consensus policy with respect to ozone developed by the SGA in February of the year.

> "Southern Governors support an ozone standard that protects human health and the environment. Our states are working to implement current air quality standards put forth by EPA in 2003. An appropriate period of time should be given to allow us to meet these new standards and measure their results before any further changes to these standards are considered."

Also in this letter, Governor Blanco points to the desire of the governors to be actively involved in the standard setting process, since decisions made at the federal level can have significant impacts on the states, especially on health and economic well being of their citizens. She also points to the important roles state and local governments have in developing and implementing policy that improves air quality in the states while achieving economic and quality of life objectives. She concludes the letter by calling for a full scientific debate on the health impacts associated with the various levels within the recommended ranges and providing the public with information about the implications of changing the existing standard.

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For the reasons described below, the Louisiana Department of Environmental Quality (LDEQ) finds that the position presented by Governor Blanco and her SGA colleagues represents sound public policy for continuing the nation's air quality improvements consistent with achieving economic and quality of life objectives for its citizens.

1. Air quality in the United States has improved considerably and measures are in place that will continue to produce cleaner air

EPA's recent air trends report, "Air Emission Summary Through 2005", shows that between 1970 and 2005, gross domestic product increased 195 percent, vehicle miles traveled (VMT) increased 178 percent, energy consumption increased 48 percent, and U.S. populations grew by 42 percent. During the same time period, total emissions of the six principal air pollutants dropped by 53 percent. According to EPA, the national average for ozone levels decreased by 21 percent between 1980 and 2006. Also, from 1990 to 2002, there was a decline of 42 percent in air toxic emissions. In it's recent analysis (July, 2007), The Annapolis Center for Science-Based Public Policy (Annapolis Center) reports that ambient air quality improvements are relatively greater than reductions in nationwide emissions. For example, carbon monoxide (CO) emissions were reduced by 51 percent from 1980-2006, but ambient CO levels were reduced by 74 percent. Similarly for nitrogen oxides (NOx), a 34 percent reduction in NOx emissions was accompanied by a 41 percent reduction in ambient NOx levels.

In a recent (September, 2007) EPA progress report for the NOx Budget Program it is reported that, in 2004, EPA designated 104 areas in the eastern U.S. as 8-hour ozone standard nonattainment areas. In 2006, four out of five of the original nonattainment areas had met the ozone standard, and the vast majority of the remaining areas had come closer to attainment.

The Clean Air Interstate Rule (CAIR) addresses emissions from electrical generating facilities in 29 eastern states plus the District of Columbia. This is a phased rule with the first phase starting in 2009 and the second in 2015. When fully implemented, CAIR will reduce sulfur dioxide (SO_2) emissions in these states by over 70 percent and nitrogen oxide (NOx) emissions by over 60 percent from 2003 levels.

Furthermore, EPA has recently promulgated a number of rules designed to reduce ambient ozone concentrations, the impacts of which will not be known for some time after the March 2008 target for publishing a final revised ozone standard. These rules address new vehicle emissions standards, new fuel standards, heavy duty and non-road diesel emissions, mobile source air toxics, and marine, rail, and aircraft emissions. In addition, more stringent emissions controls on industrial facilities, lower-emitting consumer products, and development and promotion of more energy efficient building materials and appliances will also provide clean air benefits.

2. Air quality in Louisiana has improved considerably and measures are in place that will continue to produce cleaner air

Louisiana is in attainment for all pollutants for which national ambient air quality standards (NAAQS) have been established except for ozone. In the past several decades, the number of ozone nonattainment parishes has declined from 20 to the residual of 5 parishes in the Baton Rouge ozone nonattainment area (NAA). First classified as having a "serious" ozone problem, the Baton Rouge ozone NAA was bumped up to a "severe" classification by operation of law when it failed to achieve attainment by the 1999 date specified in the Clean Air Act. However, considerable effort has been expended and considerable progress made toward reducing ozone levels in this area. Number, duration, and severity of elevated ozone episodes have declined significantly. This improvement was manifested in the classification of the Baton Rouge ozone NAA as "marginal" under the new, more stringent 8-hour ozone standard. And, in 2006, the area achieved attainment for the old 1-hour ozone standard even though it was revoked in 2005.

Considerable effort remains underway to reduce ozone levels in the Baton Rouge area through a new round of regional airshed modeling, employing new technology (infrared camera) for detecting releases of volatile organic compounds (VOCs) from barges and tanks, fenceline and mobile monitoring efforts, and new attention to emissions from our marine port facilities. Also, a considerable outreach effort is underway through LDEQ and the Baton Rouge Clean Air Coalition to inform the public of measures they can take to help reduce ozone-forming emissions.

3. Any new, lower ozone standard will be unattainable in many areas of the country

LDEQ has been directly involved in trying to solve the ozone problems in Louisiana for over three decades. Based on our experience, we predict that a new ozone standard (particularly in the low end of the ranges presented) will be unattainable in many areas of the country without a draconian shift away from combustion-based energy for transportation, electrical generation, manufacturing, agriculture, and home usage for cooking, heating, and lawn maintenance. This would, of course, require a complete change in the nation's energy, transportation, and manufacturing infrastructures which would take decades and incalculable costs to effect. It would also impose activity regulation and inconvenience that we feel the public will not accept.

EPA, in fact, admits that many areas will be unable to come into compliance given application of all known controls and instead, would need to rely on the application of unknown future controls. Particularly disconcerting to LDEQ is EPA's projection that even with emissions reductions expected from all federal programs, there will still be several areas within Louisiana that will not be in attainment in 2020.

Is it good public policy to set goals that are unachievable? What will be the public's perception of EPA and state environmental agencies' effectiveness? Setting unrealistic goals may cause the public to question the credibility of EPA and state environmental agencies. They may be reluctant to actively participate in measures needed to reduce emissions. As we

know from past experiences, public cooperation and assistance will be absolutely necessary in order to achieve any new standard.

4. *The ozone and public health assessments underpinning the called-for lowering of the ozone standard are suspect*

We have reviewed EPA's report and analysis of studies used to support revision of the ozone standard and find the health impact assessments very tenuous, especially the epidemiological work. This information certainly doesn't provide a strong, irrefutable basis for a decision with the potential impacts of a lower ozone standard. As described by the Annapolis Center in their report, "The Science and Health Effects of Ground-Level Ozone", these studies are "inconsistent, provide a biologically implausible range of results and do not establish cause and effect". The Annapolis Center report authors include a number of prestigious health care professionals including former military Surgeons General and the former chair of EPA's Clean Air Science Advisory Committee (CASAC).

We are especially skeptical of the epidemiological studies performed by health care researchers who have little knowledge of the confounding variables of micrometeorology, roadway emissions, and a myriad of photochemically-produced gases, particles, and aerosols accompanying smog and ozone formation. There also seems to be very little actual personal exposure information included in the analyses.

In the first external draft of its integrated science assessment (ISA) for its nitrogen dioxide (NO_2) standard review, EPA says that while NO_2 can be an indicator of the effects of traffic-related pollution, there is uncertainty in the findings because NO_2 is just one part of a complex mix of many pollutants from traffic that exacerbates the negative effects from NO_2. "Since it is well known that traffic-related pollutants other than NO2 produce adverse effects on public health, it is reasonable to conclude that the impact of multiple pollutant mixtures on public health produces a greater impact on public health that would be expected from NO_2 alone," the ISA says. Wouldn't this also apply to the presumed health effects of ozone in the epidemiological studies as well?

We find the results of the epidemiological studies particularly interesting when we see data that indicates the prevalence of asthma and chronic obstructive pulmonary diseases have increased dramatically while, at the same time, we have clear evidence that outdoor air quality has improved. Could it be that we as a society are now spending more time watching TV and playing video games in more polluted indoor environments? Could it be, as a recent Harvard School of Public Health study pointed out, that diets poor in fruit, vegetables, and omega-3 fatty acids are associated with lower lung function and increased odds of asthma and chronic bronchitis? Have social and cultural factors been given proper consideration when evaluating these health studies? Do the epidemiological studies address the Air Quality Indicator (AQI) advisories for unhealthful days where sensitive individuals are advised to limit outdoor activities?

New studies of human exposure cited in the Criteria Document (CD) have revealed that the first health effects upon short term ozone exposure are of a reflex nature due to the presence of an irritant gas and are unrelated to sensations of discomfort. The CD acknowledges that these effects are transient, of a reflex nature, and reversible. Has this finding been adequately factored into setting the new, proposed standards?

Of most concern, however, is that the RIA seems to suggest that EPA is still unsure about whether or not a causal relationship exists between mortality and ozone exposure. Therefore, in order to estimate the health benefits of the lower standard, EPA relied heavily on the epidemiological studies which are fraught with uncertainties. This makes it very difficult to assess whether or not the new standard will actually result in meaningful health benefits to the public.

5. Policy relevant background

In their report, the Annapolis Center asserts that EPA and its science advisors have recommended a tightening of the ozone standard relying on an inappropriate computer model to estimate the uncontrollable background of ozone. The Annapolis Center aptly describes in detail why they reached this conclusion. LDEQ agrees with this assessment and strongly recommends that background ozone levels be established by actual ambient air measurements at remote sites as has been done in the past.

6. ***Projected impacts of the proposed new ozone standards on the state of Louisiana***

According to the modeling results in EPA's Regulatory Impact Analysis (RIA), Louisiana would be significantly impacted by the proposed changes in the ozone standard. Currently, five parishes are in nonattainment with a design value 90 ppb as of 2006. EPA projects that all Louisiana parishes would be in attainment with the current standard in 2020 after full implementation of proposed and to be proposed federal rules.

If the standard is lowered to 75 ppb, two parishes would remain in nonattainment in 2020 after implementation of federal controls. Known controls would have to be applied to these parishes and the surrounding parishes within 200 kilometers. According to the RIA, these actions would bring the full state into attainment.

If the standard is lowered to 70 ppb, ten parishes would remain in nonattainment in 2020 after implementation of federal controls. Known controls would have to be applied to these parishes and all of the surrounding parishes within 200 kilometers – essentially the entire state. According to the RIA, these actions would still leave three parishes in nonattainment. To bring these parishes into attainment, currently unknown technologies would need to be developed and implemented.

7. Impact on state resources needed to implement new standards

The RIA projects the cost of application of unknown technology in Louisiana at approximately $500M for a standard of 70 ppb and $1,500M for 65 ppb. In addition to these costs, more state resources would be needed as additional LDEQ personnel would be required for ozone modeling, engineering/controls assessment, day-to-day ozone activities, and SIP planning activities. Also, many more inspectors would be needed to monitor application of rules. More Ozone Action Day planning would be needed across the state and public education on the AQI system would need to be more widespread. This all leads to more resource demands on the states and local governments.

In a recent news release, it is reported that EPA is weighing the creation of a task force to address states' concerns over the cost of implementing agency rules, following its release of a new report that finds EPA drastically underestimated those costs.

8. Planning Confusion

The Baton Rouge ozone nonattainment area will not achieve attainment of the existing 8-hour ozone standard in 2007 and, thus, will be bumped up from a "marginal" to a "moderate" designation. LDEQ has just completed the procurement process for a consultant firm to assist the agency with ozone attainment modeling and the attainment demonstration that will be required under the "moderate" classification. Do we now abandon the effort to demonstrate attainment for the existing 8-hour standard and start over with our planning effort to attain a new, lower standard?

The RIA prepared by EPA suggests that implementation of all known federal and state controls may not result in attainment at the levels proposed for the new standard. EPA's prior record of predicting attainment after certain controls have been implemented has consistently been overly optimistic requiring new calls for additional regulation. How does EPA expect states to plan for goals that are unattainable?

9. There are many counties throughout the U.S. without ozone monitors and EPA is cutting grants to states for air programs

In its July 13, 2007 Report to Congress entitled, "Ozone Air Quality Standards: EPA's 2007 Proposed Changes", the Congressional Research Service reports that only 639 of the nation's 3000 counties have ozone monitors in place. They ask, "If 533 (83%) of the counties show violations of a proposed standard using current data, how confident is the agency that the 2400 counties without monitors would all be in attainment?" They also point out that "For FY2007 and FY2008, the President's budget requested significant reductions in grants to states and local governments for air quality management, which includes funding for monitoring." Given these reductions, EPA apparently views any increase in number of monitors to be a task that will fall on state and local resources.

10. Impact on small communities/local governments with no resources

As rural areas become impacted by the lowered standard, the smaller municipalities which are severely resource limited will simply not have the technical expertise or financial resources to develop and implement the new control programs and other Clean Air Act requirements for nonattainment areas. LDEQ and EPA will be called upon to provide the necessary technical and financial resources that will be needed.

11. Impact on transportation and development

A lowering of the standard will subject additional areas of the state to federal transportation conformity requirements and could potentially impact those areas' ability to proceed with certain transportation projects. Some resource-limited metropolitan planning organizations which would be responsible for development of a transportation conformity demonstration may be unable to fulfill the conformity requirements. Significant emissions reductions employing controls beyond those employed today will be required to attain a new, lower ozone standard. Should there be an inability to demonstrate that the transportation plan conforms to the state's air quality implementation plan, certain projects such as capacity projects can not be built. Should a nonattainment area not have a metropolitan planning organization, the Department of Transportation and Development would have to expend resources in order to meet the federal requirements.

It is conceivable that the challenge of meeting conformity requirements for a lower ozone standard will place a de facto cap on transportation capacity projects and economic development for many communities.

12. Health implications of increased costs associated with the new standard and impact on standard of living

Increased costs for utilities, fuel, food, consumer goods, etc. that will accompany the implementation of a new, lower ozone standard will likely reduce the standard of living for many and may force families with limited budgets to reduce spending for nutrition and health care. This is a potential health impact that should be considered in the setting of a new ozone standard.

13. The public perception will be that air quality is getting worse

Despite the continued improvement in air quality, the public continues to perceive that the air quality is getting worse. Under the proposed standards, many areas which are now in attainment will likely become nonattainment. Lowering the standard and increasing the number of nonattainment areas will only perpetuate that myth.

In the Baton Rouge area, we will be calling more unhealthful days under the new standard even though there has been no change in general air quality. We must ensure that the public understands that the air quality is not declining.

14. Relative risk - indoor versus outdoor air

In the not too distant past, EPA examined comparative risks as a basis for establishing and prioritizing its programs. Interestingly, in comparative risk projects that ranked environmental health problems in order of the risk they pose to health and the environment, EPA ranked indoor pollutants and sources in the high risk categories. We spend about 90 percent of our time indoors and indoor air has been shown to be much more unhealthful than outdoor air. In a July, 2005 report entitled, "Indoor Air Pollution in California" prepared by the California Air Resources Board (CARB), it was reported that investigators have calculated that pollutants emitted indoors have a 1000-fold greater chance of being inhaled than do those emitted outdoors. Some major indoor air pollutants that can have substantial impact on an individual's health include: asbestos, biological agents, carbon monoxide, endocrine disruptors (flame retardants, phthalates, some pesticides), environmental tobacco smoke, formaldehyde and other aldehydes, nitrogen dioxide, lead, volatile organic compounds, particulate matter, pesticides, polycyclic aromatic hydrocarbons (PAH), and radon. The health impacts of greatest significance for these pollutants include asthma, cancer, premature death, respiratory disease, and irritant effects.

Homes and schools are critical exposure microenvironments, especially for children and seniors. These groups are known to be more sensitive to the adverse effect of some pollutants, and spend most of their time indoors. The CARB report points out that, because of a number of factors, children are especially vulnerable to poor indoor air quality. These factors, combined with elevated indoor concentrations of pollutants, can lead to higher exposure and risk for children than adults (CARB, 2005).

We have raised this issue of comparative risk between outdoor and indoor air quality to present for consideration the following question. Why are we considering investing billions of dollars for a small incremental improvement in air quality and questionable public health benefits brought by lowering the present ozone standard, while essentially ignoring the much greater public health risk of poor indoor air quality? It seems that much greater gains in public health protection could be achieved from reductions in indoor emissions, other measures that could be taken to reduce indoor pollution, and by informing the general public of ways they can protect themselves from adverse health effects of poor indoor air quality.

15. Secondary standard a mystery

LDEQ is unaware of any information that has been provided by EPA outside of the final ozone Staff Paper that provides the state environmental and agricultural agencies with information on the need for the new proposed cumulative secondary standard or what to expect with implementation of the standard. Louisiana has understandably positioned its ozone monitors mainly in urban areas for protection of public health. Given the proposed standards' new metrics, how does EPA envision the states modeling, measuring, or assuring compliance with the new standards?

Apparently no new data have been presented since the 1997 review to reduce uncertainties and limitations of a cumulative secondary standard and, thus, we see no compelling reason to change the current secondary standard.

Summary: Pivotal Questions

Although certain activist and special interest groups would have you believe otherwise, the nation's air quality has shown good improvement even in the face of increasing population, vehicle traffic, and energy consumption. There is always the desire for an even cleaner and healthier environment, but there is no immediate health care crisis being presented by ambient air quality in this country. Although cost is proscribed from consideration in establishing a new ozone standard, it is obvious that the implementation of a new ozone standard (particularly in the lower portion of the range being considered) will have a profound cost impact on this country's economy, energy infrastructure, fuels, transportation, and consumer goods. Two pivotal questions should be answered in making the decision on the new ozone standard: (1) do the benefits justify the burden? and (2) will the greater public good be served by investing our efforts and financial resources in implementing a more stringent ozone standard or, given clean air improvements already underway, are there other, greater societal needs that would benefit from additional investment?

Thank you for this opportunity to comment on the proposed revisions for the primary and secondary ozone standards.

Sincerely,

Mike D. McDaniel, Ph.D.
Secretary

c: Governor Kathleen Babineaux Blanco
Richard E. Greene, EPA Region 6 Administrator
Bob Odom, Louisiana Commissioner of Agriculture and Forestry